



DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

[Docket No. FWS–R8–ES–2013–0092; 4500030113]

RIN 1018–AY77

Endangered and Threatened Wildlife and Plants; 12-Month Finding on a Petition to Downlist *Hesperocyparis abramsiana* (= *Cupressus abramsiana*), and Proposed Rule to Reclassify *H. abramsiana* as Threatened

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Proposed rule and 12-month petition finding.

SUMMARY: We, the U.S. Fish and Wildlife Service, announce a 12-month finding on a petition to reclassify *Hesperocyparis abramsiana* (= *Cupressus abramsiana*) (Santa Cruz cypress) as threatened under the Endangered Species Act of 1973, as amended (Act). After review of all available scientific and commercial information, we find that reclassifying Santa Cruz cypress as threatened is warranted, and therefore, we propose to

reclassify Santa Cruz cypress as threatened under the Act. We also propose to correct the scientific name of Santa Cruz cypress on the List of Endangered and Threatened Plants. We are seeking information and comments from the public regarding this proposed rule and 12-month finding.

DATES: We will accept comments received or postmarked on or before **[INSERT DATE 60 DAYS AFTER DATE OF FEDERAL REGISTER PUBLICATION]**. We must receive requests for public hearings, in writing, at the address shown in the **FOR FURTHER INFORMATION CONTACT** section by **[INSERT DATE 45 DAYS AFTER DATE OF FEDERAL REGISTER PUBLICATION]**.

ADDRESSES: *Comment submission:* You may submit comments by one of the following methods:

(1) *Electronically:* Go to the Federal eRulemaking Portal:

<http://www.regulations.gov>. In the Search box, enter FWS–R8–ES–2013–0092, which is the docket number for this rulemaking. Then, in the Search panel on the left side of the screen, under the Document Type heading, click on the Proposed Rules link to locate this document. You may submit a comment by clicking on “Comment Now!”

(2) *By hard copy:* Submit by U.S. mail or hand-delivery to: Public Comments Processing, Attn: FWS–R8–ES–2013–0092; Division of Policy and Directives Management; U.S. Fish and Wildlife Service; 4401 N. Fairfax Drive, MS 2042–PDM; Arlington, VA 22203.

We request that you send comments **only** by the methods described above. We will post all comments on <http://www.regulations.gov>. This generally means that we will post any personal information you provide us (see the **Information Requested** section below for more information).

Document availability: A copy of the Species Report referenced throughout this document can be viewed at

<http://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?scode=R005>, at <http://www.regulations.gov> under Docket No. FWS–R8–ES–2013–0092, or at the Ventura Fish and Wildlife Office’s website at <http://www.fws.gov/ventura/>.

FOR FURTHER INFORMATION CONTACT: Stephen P. Henry, Deputy Field Supervisor, U.S. Fish and Wildlife Service, Ventura Fish and Wildlife Office, 2493 Portola Road, Suite B, Ventura, CA 93003; telephone 805–644–1766; facsimile 805–644–3958. If you use a telecommunications device for the deaf (TDD), call the Federal Information Relay Service (FIRS) at 800–877–8339.

SUPPLEMENTARY INFORMATION:

Information Requested

We intend any final action resulting from this proposal will be based on the best scientific and commercial data available, and be as accurate and as effective as possible. Therefore, we request comments or information from other governmental agencies,

tribes, the scientific community, industry, or other interested parties concerning this proposed rule. We particularly seek comments concerning:

(1) Reasons why we should or should not reclassify Santa Cruz cypress under the Act (16 U.S.C. 1531 *et seq.*).

(2) New biological or other relevant data concerning any threat (or lack thereof) to this species.

(3) New information concerning the population size or trends of this species.

(4) New information on how Santa Cruz cypress responds to fire, especially as it pertains to prescribed fire and alternatives to prescribed fire (e.g., mechanical disturbance) that would support increased recruitment for this species.

(5) New information on the current or planned activities within the range of the species that may adversely affect or benefit the species.

(6) New information or data on the projected and reasonably likely impacts to Santa Cruz cypress or its habitat associated with climate change.

Please include sufficient information with your submission (such as scientific journal articles or other publications) to allow us to verify any scientific or commercial

information you include. Please note that submissions merely stating support for or opposition to the action under consideration without providing supporting information, although noted, will not be considered in making a determination, as section 4(b)(1)(A) of the Act directs that determinations as to whether any species is an endangered or threatened species must be made “solely on the basis of the best scientific and commercial data available.”

You may submit your comments and materials concerning this proposed rule by one of the methods listed in the **ADDRESSES** section. We request that you send comments only by the methods described in the **ADDRESSES** section. If you submit information via <http://www.regulations.gov>, your entire submission—including any personal identifying information—will be posted on the Web site. If your submission is made via a hardcopy that includes personal identifying information, you may request at the top of your document that we withhold this information from public review. However, we cannot guarantee that we will be able to do so. We will post all hardcopy submissions on <http://www.regulations.gov>.

Comments and materials we receive, as well as supporting documentation we used in preparing this proposed rule, will be available for public inspection on <http://www.regulations.gov>, or by appointment, during normal business hours, at the U.S. Fish and Wildlife Service, Ventura Fish and Wildlife Office (see **FOR FURTHER INFORMATION CONTACT**).

Public Hearings

Section 4(b)(5) of the Act provides for one or more public hearings on this proposal, if requested. We must receive your request within 45 days after the date of this **Federal Register** publication. Send your request to the address shown in **FOR FURTHER INFORMATION CONTACT**. We will schedule public hearings on this proposal, if any are requested, and announce the dates, times, and places of those hearings, as well as how to obtain reasonable accommodations, in the **Federal Register** and local newspapers at least 15 days before the hearing.

Peer Review

In accordance with our joint policy on peer review published in the **Federal Register** on July 1, 1994 (50 FR 34270), we will seek the expert opinions of at least three appropriate and independent specialists regarding this proposed rule. A thorough review of information that we relied on in preparing this proposed rule—including information on taxonomy, life-history, ecology, population distribution and abundance, and potential threats—is presented in the Santa Cruz Cypress Species Report (Service 2013) available at www.regulations.gov (Docket Number FWS–R8–ES–2013–0092). The purpose of peer review is to ensure that decisions are based on scientifically sound data, assumptions, and analyses. A peer review panel will conduct an assessment of the proposed rule, and the specific assumptions and conclusions regarding the proposed downlisting. This assessment will be completed during the public comment period.

We will consider all comments and information we receive during the comment period on this proposed rule as we prepare the final determination. Accordingly, the final decision may differ from this proposal.

Previous Federal Action

We proposed to list Santa Cruz cypress (as *Cupressus abramsiana*) as an endangered species under the Act on September 12, 1985 (50 FR 37249), based on threats from residential development, agricultural conversion, logging, oil and gas drilling, and the alteration of the natural fire regime that maintains the stands. We published a final rule listing Santa Cruz cypress as an endangered species (which included an additional threat, genetic introgression, not listed in the proposed rule) in the **Federal Register** on January 8, 1987 (52 FR 675). We finalized a recovery plan for Santa Cruz cypress (Recovery Plan) in September 1998 (Service 1998).

Under the Act, we maintain the Lists of Endangered and Threatened Wildlife and Plants at 50 CFR 17.11 (for animals) and 17.12 (for plants) (Lists). We amend the Lists by publishing final rules in the **Federal Register**. Section 4(c)(2)(A) of the Act requires that we conduct a review of listed species at least once every 5 years. Section 4(c)(2)(B) requires that we determine: (1) Whether a species no longer meets the definition of endangered or threatened and should be removed from the Lists (delisted), (2) whether a species listed as endangered more properly meets the definition of threatened and should

be reclassified to threatened (downlisted), or (3) whether a species listed as threatened more properly meets the definition of endangered and should be reclassified to endangered (uplisted). In accordance with 50 CFR 424.11(d), using the best scientific and commercial data available, we will consider a species for delisting only if the data substantiate that the species is neither endangered nor threatened for one or more of the following reasons: (1) The species is considered extinct; (2) the species is considered recovered; or (3) the original data available when the species was listed, or the interpretation of such data, were in error.

We published a notice announcing active review and requested public comments concerning the status of Santa Cruz cypress under section 4(c)(2) of the Act on February 14, 2007 (72 FR 7064). We notified the public of completion of the 5-year review on May 21, 2010 (75 FR 28636). The 5-year review, completed on August 17, 2009 (Service 2009), resulted in a recommendation to change the status of the species from endangered to threatened. A copy of the 2009 5-year review for Santa Cruz cypress is available on the Service's Environmental Conservation Online System (http://ecos.fws.gov/docs/five_year_review/doc2551.pdf).

On December 21, 2011, we received a petition dated December 19, 2011, from the Pacific Legal Foundation, requesting the Service to delist the Inyo California towhee (*Pipilo crissalis eremophilus*), and to reclassify from endangered to threatened the arroyo toad (*Anaxyrus californicus*), Modoc sucker (*Catostomus microps*), *Eriodictyon altissimum* (Indian Knob mountainbalm), *Astragalus jaegerianus* (Lane Mountain milk-

vetch), and Santa Cruz cypress. The petition was based on the analysis and recommendations contained in the most recent 5-year reviews for these taxa. On June 4, 2012 (77 FR 32922), we published in the **Federal Register** a 90-day finding for the 2011 petition to reclassify these six taxa. In our 90-day finding, we determined the 2011 petition provided substantial information indicating the petitioned actions may be warranted, and we initiated status reviews for each species. This proposed downlisting rule constitutes the 12-month finding and our 5-year status review for Santa Cruz cypress; 12-month findings for the other petitioned species will be addressed separately and published in the **Federal Register** in the future.

Background

A scientific analysis was completed and presented in detail within the Santa Cruz Cypress Species Report (Service 2013, entire), which is available at <http://www.regulations.gov> at Docket Number FWS–R8–ES–2013–0092. The Species Report was prepared by Service biologists to provide thorough discussion of the species ecology, biological needs, and analysis of the threats that may be impacting the species. The Species Report includes discussion of the following: species description, taxonomy, life history, habitat, distribution, abundance, population descriptions, age and size class distribution, threats analysis, progress towards recovery, and research needs. This detailed information is summarized in the following paragraphs of this **Background** section and the **Summary of Factors Affecting the Species** section.

Santa Cruz cypress is a small-statured tree in the cypress family (Cupressaceae), with mature trees averaging 20 to 33 feet (6 to 10 meters) in height (Bartel 2012, p. 138). Reproductive maturity is reached at an average age of 11 years, although some individuals produce cones earlier (Kuhlmann 1986, p. 8). The potential lifespan of the Santa Cruz cypress is approximately 100 years or longer (Service 2013, p. 9).

The taxonomy of and relationships among members of the cypress family (Cupressaceae) have undergone many revisions, as described in greater detail in the Species Report (Service 2013, pp. 8–9). Most recently, a new genus, *Hesperocyparis* Bartel and Price, was described to recognize that the western hemisphere *Cupressus* taxa, including Santa Cruz cypress, comprise a group quite separate from the eastern hemisphere taxa (Adams *et al.* 2009, p. 180). This taxonomic revision, published since listing, changed the name of the listed entity from *Cupressus abramsiana* to *Hesperocyparis abramsiana*, but did not alter the definition, distribution, or range of the species from what it was at the time of listing. Based on this revision, we include in this document a proposed correction to this taxon’s scientific name, to list it as *Hesperocyparis abramsiana* on the List of Endangered and Threatened Plants at 50 CFR 17.12(h).

Recent taxonomic evaluations of *Hesperocyparis abramsiana* have identified two varieties of the species: *H. a.* var. *abramsiana* and *H. a.* var. *butanoensis* (San Mateo cypress) (Adams and Bartel 2009). The listed entity includes all members of this species (i.e., both varieties currently have the same protections under the Act), which are

represented by one population in San Mateo County, California (*H. a. var. butanoensis*; known as the Butano Ridge population), and four populations in Santa Cruz County, California (*H. a. var. abramsiana*; known as the Eagle Rock, Bracken Brae, Bonny Doon, and Majors Creek populations). These five populations comprise eight distinct stands (trees with similar species composition, age, and condition considered to be a homogeneous unit). *Hesperocyparis abramsiana* var. *butanoensis* is distinguished from *H. a. var. abramsiana* by its longer seed cones (Bartel 2012, p. 138). Both varieties are collectively referred to as Santa Cruz cypress for the remainder of this document unless otherwise noted.

At the time of listing, population estimates for Santa Cruz cypress were based on field reconnaissance rather than systematic observations of stand area and density. These estimates did not differ greatly from the estimates used in the 1998 Recovery Plan (Service 1998), which used numbers from a demographic report (Lyons 1988) of the species from 1988. In 2007, we funded a directed study of three populations (Butano Ridge, Majors Creek, and Eagle Rock) to obtain more accurate estimates on population numbers and area (McGraw 2007, entire), and we derived updated estimates for the remaining two populations from McGraw (2007) and Taylor (*in litt.* 2005).

McGraw (2007) and Taylor (*in litt.* 2005) represent the best currently available scientific and commercial information regarding number of individual trees, coverage area (acreage) for all populations, reproduction, and recruitment. Survey data indicate the estimated number of individual trees for all 5 populations ranges from approximately

2,786 individuals in the Butano Ridge population to approximately 10,000 to 20,000 individuals in the Bracken Brae population (Table 2 in Service 2013, p. 13). The five populations range in size from approximately 8 to 128 acres (ac) (3 to 52 hectares (ha)) (Table 2 in Service 2013, p. 13). McGraw's (2007, p. 20) study at the Butano Ridge, Eagle Rock, and Majors Creek populations showed high levels of new cone formation (also expected to be similar at the Bonny Doon and Bracken Brae populations), which is an indicator of reproductive vigor. Santa Cruz cypress, like most cypress species, are obligate seeders; the trees do not resprout after a disturbance event such as a fire, and are thus totally dependent on seed establishment for post-disturbance regeneration (Bartel and Knudsen 1983, p. 3). While seed production appears to be strong, recruitment—which depends more on the availability of habitat—is more variable between stands (Service 2013, p. 45).

For a detailed discussion of Santa Cruz cypress's description, taxonomy, life history, habitat, soils, distribution, abundance, age and size distribution, and role of fire in regeneration, please see the Species Report available for review at <http://www.regulations.gov> under Docket No. FWS-R8-ES-2013-0092.

Recovery and Recovery Plan Implementation

Section 4(f) of the Act directs us to develop and implement recovery plans for the conservation and survival of endangered and threatened species unless we determine that such a plan will not promote the conservation of the species. Under section 4(f)(1)(B)(ii),

recovery plans must, to the maximum extent practicable, include: “Objective, measurable criteria which, when met, would result in a determination, in accordance with the provisions of [section 4 of the Act], that the species be removed from the list.” However, revisions to the list (adding, removing, or reclassifying a species) must reflect determinations made in accordance with sections 4(a)(1) and 4(b) of the Act. Section 4(a)(1) requires that the Secretary determine whether a species is endangered or threatened (or not) because of one or more of five threat factors. Section 4(b) of the Act requires that the determination be made “solely on the basis of the best scientific and commercial data available.” Therefore, recovery criteria should indicate when a species is no longer an endangered species or threatened species because of any of the five statutory factors.

Thus, while recovery plans provide important guidance to the Service, States, and other partners on methods of minimizing threats to listed species and measurable objectives against which to measure progress towards recovery, they are not regulatory documents and cannot substitute for the determinations and promulgation of regulations required under section 4(a)(1) of the Act. A decision to revise the status of or remove a species from the Federal List of Endangered and Threatened Plants (50 CFR 17.12) is ultimately based on an analysis of the best scientific and commercial data then available to determine whether a species is no longer an endangered species or a threatened species, regardless of whether that information differs from the recovery plan.

In 1998, we finalized a recovery plan for Santa Cruz cypress (Recovery Plan; Service 1998). The Recovery Plan states that Santa Cruz cypress can be reclassified to threatened status when protection is secured for all five populations and their habitat from the primary threats of logging, agricultural conversion, and development (Service 1998, p. 30). This criterion was intended to address the point at which imminent threats to the species had been ameliorated so that the populations were no longer in immediate risk of extirpation. Because of its limited range and distribution, we determined that essentially all of the known habitat is necessary to conserve the species. At the time the Recovery Plan was prepared, we estimated that areal extent totaled 356 ac (144 ha). After more accurate mapping (McGraw 2007, entire), we now estimate that areal extent totals approximately 188 ac (76 ha) (Service 2013, p. 43). Additionally, estimated abundance of individuals in all populations has changed over time, from approximately 2,300 individuals at the time of listing in 1987, to a current range of 33,000 to 44,000 individuals (although the latter estimate is variable due to mortality and regeneration following the 2008 Martin Fire that burned 520 ac (210 ha) of land and a portion of the Bonny Doon population) (see Table 1 and the Bonny Doon population discussion under the “Population Descriptions” section of the Species Report (Service 2013, pp. 6, 15–17)). It is important to note that the updated estimates for species abundance and areal extent do not illustrate trends but rather improved information about the species over time.

As explained in more detail in the Species Report (Service 2013, p. 43), three of five populations occur primarily or entirely on lands that are being managed for

conservation purposes, including the Butano Ridge population at Pescadero Creek County Park, the Bonny Doon population at Bonny Doon Ecological Reserve managed by the California Department of Fish and Wildlife (CDFW), and the Eagle Rock population at Big Basin State Park managed the California Department of Parks and Recreation (CDPR). A fourth population (Majors Creek) is primarily on lands at Gray Whale Ranch State Park, with a small portion on privately owned land. The fifth population (Bracken Brae) is entirely on private lands owned by a conservation-oriented landowner. This land is also designated by the County of Santa Cruz as environmentally sensitive habitat, which places restrictions on most development. Because four of the five populations, either wholly or primarily, occur on park or reserve lands, most of the individuals in the Bonny Doon, Butano Ridge, Majors Creek, and Eagle Rock populations are protected against the threats identified as imminent (logging, agricultural conversion, and development) at the time of listing and in the Recovery Plan. Because the Bracken Brae population is being managed by a conservation-oriented landowner and county restrictions are in place that would restrict most development, development-related threats to this population appear negligible compared to other active threats. Therefore, we conclude that the downlisting criterion has been substantially met.

The Recovery Plan also states that Santa Cruz cypress can be delisted when all five populations are assured of long-term reproductive success, with insurance against failure provided by the availability of banked seed (Service 1998, p. 45). This criterion was intended to address the point at which long-term threats to the species' persistence had been addressed and its persistence ensured. As explained in more detail in the

Species Report (Service 2013, pp. 18–20), Santa Cruz cypress requires fire or other disturbance for germination of seeds and recruitment of new individuals into the populations. As detailed below in the **Summary of Factors Affecting the Species** section and in the Species Report (Service 2013, pp. 23–25), alteration of fire regime and lack of management are likely to significantly impact the long-term persistence of the species. Additionally, only seed for the Bonny Doon, Majors Creek, and Bracken Brae populations is stored in a conservation bank; no seed has been banked for the Eagle Rock or Butano Ridge populations. Therefore, based on our analysis of the best available information, we conclude that the delisting criterion for the species has not been met.

In addition to the significant protections now afforded to Santa Cruz cypress as outlined above, various studies have occurred since development of the Recovery Plan that aid in our understanding of the status of Santa Cruz cypress. For example:

- Recent surveys indicate that four of the five stands of Santa Cruz cypress contain a larger number of individuals than was estimated at the time of listing and in the Recovery Plan (Service 2013, p. 43).
- Although data indicate the majority of trees are reproductive, many trees (as indicated by surveys conducted specifically at Butano Ridge and Majors Creek populations) are even-aged (occur in stands or populations with individuals all of approximately the same age). Even-aged stands indicate that vigorous recruitment (survival of seedlings to reproductive age and into the adult population) is not evident (McGraw 2011, p. 26). In contrast, vigorous recruitment would be indicated by stands or

populations including individuals of multiple sizes or age classes representing various life stages of the species.

- While seed production appears to be strong at each of the sampled populations, recruitment, which depends more on extrinsic factors such as the availability of appropriate habitat for seedling survival, is more variable among stands even within a population.

These and other data that we have analyzed indicate that most threats identified at listing and during the development of the Recovery Plan are reduced in areas occupied by Santa Cruz cypress and that the status of Santa Cruz cypress has improved, primarily due to the habitat protection provided by CDFW, CDPR, the County of San Mateo, and the County of Santa Cruz. However, threats associated with alteration of fire regime and lack of habitat management continue to impede the species' ability to recover.

Additional information on recovery and recovery plan implementation are described in the "Progress Toward Recovery" section of the Species Report (Service 2013, pp. 39–43).

Summary of Factors Affecting the Species

Section 4 of the Act and its implementing regulations (50 CFR part 424) set forth the procedures for listing species, reclassifying species, or removing species from listed status. "Species" is defined by the Act as including any species or subspecies of fish or

wildlife or plants, and any distinct population segment of any species of vertebrate fish or wildlife which interbreeds when mature (16 U.S.C. 1532(16)). A species may be determined to be an endangered or threatened species because of any one or a combination of the five factors described in section 4(a)(1) of the Act: (A) The present or threatened destruction, modification, or curtailment of its habitat or range; (B) overutilization for commercial, recreational, scientific, or educational purposes; (C) disease or predation; (D) the inadequacy of existing regulatory mechanisms; or (E) other natural or human made factors affecting its continued existence. A species may be reclassified on the same basis.

Determining whether the status of a species has improved to the point that it can be downlisted requires consideration of whether the species is endangered or threatened because of the same five categories of threats specified in section 4(a)(1) of the Act. For species that are already listed as endangered or threatened, this analysis of threats is an evaluation of both the threats currently facing the species and the threats that are reasonably likely to affect the species in the foreseeable future following the delisting or downlisting and the removal or reduction of the Act's protections.

A species is an "endangered species" for purposes of the Act if it is in danger of extinction throughout all or a significant portion of its range and is a "threatened species" if it is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range. The word "range" in the significant portion of its range phrase refers to the range in which the species currently exists. For the purposes of

this analysis, we first evaluate the status of the species throughout all its range, then consider whether the species is in danger of extinction or likely to become so in any significant portion of its range.

At the time of listing, the primary threats to Santa Cruz cypress were residential development, agricultural conversion, logging, oil and gas drilling, genetic introgression, and alteration of the natural frequency of fires that threatened to destroy portions of each population (52 FR 675; January 8, 1987). Other (secondary) threats in 1987 included vandalism, disease, and inadequate regulatory mechanisms (52 FR 675). Of the primary threats in 1987, residential development, agricultural conversion, and logging threatened individual Santa Cruz cypress trees and stands with imminent destruction.

By the time the Recovery Plan was developed in 1998 (Service 1998, p.1), threats to Santa Cruz cypress from residential development, agricultural conversion, oil and gas drilling, and logging were still a concern but had already substantially decreased. The other (secondary) threats identified at the time of listing had not been ameliorated by the time the Recovery Plan was developed, particularly alteration of the natural fire frequency because fire exclusion activities still occurred on nearby properties (Service 1998, pp. 20–25). Additionally, the Recovery Plan included a discussion of threats to Santa Cruz cypress posed by nonnative species, reproductive isolation, and predation (Service 1998, pp. 22, 23). Subsequently, we conducted a 5-year status review (which included an analysis of threats that affect the species) in 2009 (Service 2009, pp. 7–11). By this point in time, much of the existing habitat for Santa Cruz cypress had been

acquired by the State of California; thus, many impacts previously considered significant to the species were of a lesser concern, with the exception of residential development and agricultural conversion at portions of populations that were not yet conserved. Our review concluded that the impacts from alteration of the fire regime, disease or predation, reproductive isolation, genetic introgression, and competition with nonnative species remained at the same level as identified in the Recovery Plan.

A thorough analysis and discussion of the current status review initiated with our 2012 90-day finding (77 FR 32922) is detailed in the Species Report (Service 2013, entire). In the Species Report, we identified levels of threats using a scale of low, moderate, or high (see Service 2013, Appendix 1, for a description of the methodology). As used in this Species Report, a low-level threat has the potential to occur at any time, but is unlikely to affect the species across its entire range or preclude its persistence into the future; a moderate-level threat is currently affecting the long-term persistence of a particular population or across the species' range, but does not pose an imminent threat to the persistence of the species; and a high-level threat is a well-documented imminent threat to a large number of individuals that has the potential to disrupt the long-term persistence of the species in a particular population or across its entire range. Current or potential future threats to Santa Cruz cypress include alteration of the fire regime (Factors A and E; high-level threat), competition with nonnative species (Factors A and E; moderate-level threat), climate change (Factor A; moderate-level threat), genetic introgression (Factor E; low-level threat), and vandalism and unauthorized recreational activities (Factors A and E; low-level threat). The existing regulatory mechanisms are

inadequate to protect the species from these threats (Factor D; low-level threat). Other potential impacts evaluated and found to either be of no concern, insignificant concern, or negligible at this time include residential development, agricultural conversion, logging, and oil and gas drilling (Factor A); overutilization (Factor B); disease or predation (Factor C); and reproductive isolation (Factor E). Please see Table 1, Table 4, and the “Discussion of Threats to the Species” section of the Species Report for a thorough discussion of all potential and current threats (Service 2013, pp. 3, 22–40).

We note, however, that, although the threats of residential development and agricultural conversion to Santa Cruz cypress have been ameliorated considerably compared to the time of listing (to the point that we consider them insignificant at this time), they remain a concern at two of the populations (i.e., the Bracken Brae and Bonny Doon populations) to a lesser degree than previously identified in the Recovery Plan. Specifically, while the land is not in permanent conservation ownership, the likelihood of potential residential development is reduced at the Bracken Brae population because the land is owned by a conservation-oriented landowner (Service 2013, p. 45) and county designation of these lands as a sensitive area places a restriction on certain kinds of development. We do not expect this county designation as a sensitive area to change in the future, even if the species is reclassified to threatened or eventually delisted. Additionally, agricultural conversion is currently reduced (to an insignificant level) at the Bonny Doon population as a result of a large proportion of the population (i.e., approximately 70 percent) now occurring on lands designated as a reserve (Service 2013, pp. 15, 16, 45). The portion that is not part of the reserve (i.e., approximately 30 percent)

is still subject to potential agricultural conversion, although potential loss of even this area outside the reserve is relatively unlikely due to the county's designation of these lands as a sensitive area (thus a low magnitude threat overall for the population and the species as a whole). The increased level of conservation afforded to these two populations as compared to the time of listing has been achieved primarily through the acquisition of lands for conservation by CDPR and CDFW.

The following sections provide a summary of the current threats impacting the Santa Cruz cypress. As identified above, these threats include alteration of the fire regime (Factors A and E), competition with nonnative species (Factors A and E), climate change (Factor A), genetic introgression (Factor E), vandalism and unauthorized recreational activities (Factors A and E), and the inadequacy of existing regulatory mechanisms (Factor D).

Alteration of Fire Regime

The long-term persistence of Santa Cruz cypress populations can be affected by the disruption of the natural fire frequency because Santa Cruz cypress requires fire (or potentially mechanical disturbance in lieu of, or in combination with, fire) to reproduce. Most Santa Cruz cypress populations are located close to residential areas, where natural fires are excluded from surrounding wildland areas by the creation of fire breaks and fuels reduction projects. Both fire exclusion and fire suppression lengthen the interval between fires, thus altering the natural fire regime and increasing the risk of extirpation

from senescence (growth phase from full maturity to death). Conversely, human ignitions contribute to fire intervals that are too short, which in turn can inhibit Santa Cruz cypress from reaching its reproductive potential if stands burn prior to trees reaching reproductive age.

The altered fire regime presents a high-level threat to the long-term persistence of all of the Santa Cruz cypress populations and their habitat. Santa Cruz cypress depends on fire to maintain appropriate habitat conditions and to release many of the seeds stored in cones in the canopy. As adult trees senesce and die, seed production decreases, such that there is insufficient seed available to regenerate the stand (McGraw 2007, p. 24). In the absence of fire, recruitment still occurs, but at a low level that is likely not sufficient for stand replacement (McGraw 2011, p. 2). To germinate in large numbers, the species requires open soil and canopy conditions created by fires intense enough to kill the parent tree; in the absence of fire the species is only able to germinate opportunistically in rock outcroppings or small disturbance areas. Without appropriate disturbance from fire, the stands could eventually senesce, resulting in minimal reproduction in small rock outcrops that may be inadequate to maintain population viability.

Within the range of the Santa Cruz cypress, fire has been documented at the Bonny Doon and Eagle Rock populations, although even-aged stands at the Butano Ridge, Bracken Brae, and Majors Creek populations suggest that past fires have occurred. However, McGraw (2011, p. 2) states that the current demographics and natural recruitment rates observed in the Majors Creek, Eagle Rock, and Butano Ridge

populations appear to be insufficient to maintain the populations in the absence of fire. Additionally, active management to address this concern is not occurring at this time. See additional discussion in the “Alteration of Fire Regime” section of the Species Report (Service 2013, pp. 23–25).

Competition with Nonnative Species

The presence of nonnative, invasive species impacts the long-term persistence of Santa Cruz cypress and its habitat both currently and in the future through competition and habitat modification. Many nonnative species have been introduced into Santa Cruz cypress habitat through a variety of past impacts (e.g., development, infrastructure). Significant impacts result from *Acacia dealbata* (silver wattle) and *Genista monspessulana* (French broom). Silver wattle is significantly impacting the Majors Creek population and its habitat by creating dense canopies, which can inhibit seedlings by blocking sunlight needed for cypress growth (McGraw 2007, p. 23). French broom is one of the most prevalent invasive species in Santa Cruz County, located at elevations where all but a portion of one Santa Cruz cypress population occurs (Moore 2002, p. 6). French broom is significantly impacting the Bonny Doon population and its habitat by inhibiting Santa Cruz cypress seedling establishment through competition for open, recently disturbed soils that have access to abundant sunlight. Additionally, European annual grasses (present at all populations) are known to impact Santa Cruz cypress by precluding the establishment of seedlings, but these grasses do not impact Santa Cruz cypress as significantly as silver wattle or French broom, which are currently impacting

two populations (i.e., Majors Creek and Bonny Doon) and likely to impact, at minimum, two additional populations (i.e., Eagle Rock and Bracken Brae) due to the cypress's proximity to residential areas where ground disturbance activities promote nonnative plant invasions. We consider competition with nonnative species to be a moderate-level threat to the Santa Cruz cypress. See additional discussion in the "Competition With Nonnative Plant Species" section of the Species Report (Service 2013, pp. 31–33).

Climate Change

The term "climate change" refers to a change in the mean or variability of one or more measures of climate (e.g., temperature or precipitation) that persists for an extended period, usually decades or longer, whether the change is due to natural variability, human activity, or both (IPCC 2007, p. 78). Various types of changes in climate can have direct or indirect effects on species, including Santa Cruz cypress. Scientific measurements spanning several decades demonstrate that changes in climate are occurring, and the rate of change has increased since the 1950s (e.g., IPCC 2007, p. 30; Solomon *et al.* 2007, pp. 35–54, 82–85). Within central-western California (i.e., California coastal counties from San Francisco south to Santa Barbara, including the range of the Santa Cruz cypress), predictions indicate warmer winter temperatures, earlier warming in the spring, and increased summer temperatures (PRBO Conservation Science 2011, p. 35), all of which will likely result in shifts in vegetation types. This can, for example, result in increased competition between species like Santa Cruz cypress and other native and nonnative species (Loarie *et al.* 2008), or result in habitat changes resulting from altered fire

frequency and water availability (Service 2013, p. 28–29). We consider climate change to be a moderate-level threat to the Santa Cruz cypress. See additional discussion in the “Climate Change” section of the Species Report (Service 2013, pp. 26–29).

Genetic Introgression

If individuals of different cypress species are planted in close proximity, they can exchange pollen and may produce fertile hybrid offspring, as has been documented in a number of plant species (Rhymer and Simberloff 1996, pp. 98–99). By this means, genes from one species can infiltrate into another, which is a process called genetic introgression. Santa Cruz cypress may be affected by introgression from residential plantings of *Hesperocyparis macrocarpa* (Monterey cypress) near the Bonny Doon population (Haley 1993, pers. obs.), plantings of *Cupressus glabra* (Arizona cypress) near the Eagle Rock population, and potentially plantings near other populations due to their close proximity to residential areas where plantings of other cypress species could occur. Because considerable genetic variation exists among Santa Cruz cypress populations (Miller and Westfall 1992, p. 350), it is probable that, in the absence of geographical barriers, hybridization may occur among the different populations of Santa Cruz cypress as well as between Santa Cruz cypress and the neighboring species. We consider genetic introgression to be a low-level threat to the Santa Cruz cypress. See additional discussion in the “Genetic Introgression” section of the Species Report (Service 2013, pp. 30–31).

Vandalism and Unauthorized Recreational Activities

Vandalism and unauthorized recreational activities have been documented to impact multiple Santa Cruz cypress populations and their habitat. These activities result in construction of unauthorized trails (such as those within the Majors Creek population at Wilder Creek State Park) (CDPR 2000; Barry 2012, pers. obs.), which in turn result in erosion (McGraw 2007, p. 22) and potentially prevention of seedling establishment. Additionally, trails wear away substrate from the base of mature cypress trees. Although vandalism and unauthorized recreational activities are not considered to significantly impact the populations at this time (considered a low-level threat), they remain a concern due to the likelihood of increased inhabitants in the urban-wildland interface where Santa Cruz cypress occurs. See additional discussion in the “Vandalism and Unauthorized Recreational Activities” section of the Species Report (Service 2013, p. 33).

Existing Regulatory Mechanisms

Reclassifying Santa Cruz cypress from endangered to threatened would not significantly change the protections afforded to this species under the Act. Santa Cruz cypress conservation has been addressed in some local, State, and Federal plans, laws, regulations, and policies. Now that most of the trees reside in fully protected areas on State or County park lands, the inadequacy of existing regulatory mechanisms is considered a low-level threat to Santa Cruz cypress. However, the main concern currently and into the future is the lack of ongoing management to prevent senescence

and ensure population persistence. While we recognize the benefits of management flexibility, we also recognize that such flexibility with regard to implementation of land use plans can result in land use decisions that negatively affect Santa Cruz cypress or its habitat. See additional discussion in the “Legal Protection” section of the Species Report (Service 2013, pp. 34–37).

Combination of Threats

The threat to the long-term persistence of Santa Cruz cypress is compounded by multiple interacting factors, specifically: (1) The alteration of fire regimes and lack of species management; and (2) human activities, nonnative species, and fire. With the prevalence of fire exclusion and suppression near residential communities within the range of the species, the opportunity for Santa Cruz cypress to regenerate in large pulses following fire is reduced. This fire suppression coupled with the lack of species-specific management is resulting in minimal regeneration for the species as a whole, which could be exacerbated if this continues into the future. The ability of land managers to adequately maintain cypress populations on public lands is subject to constraints and physical barriers. Additionally, human intrusion into previously undisturbed areas contributes to colonization of nonnative plant species in the remote areas of Santa Cruz cypress forests (see the “Competition with Nonnative Plant Species” section of the Species Report (Service 2013, pp. 31–33)). This activity exacerbates the likelihood for the creation of open conditions (e.g., bike trails, road cuts, firebreaks), allowing nonnative plants to proliferate and compete with the cypress for soil, nutrients, and light.

If a wildfire is then introduced into these new (open) conditions, nonnative species that compete with Santa Cruz cypress could then easily spread. The presence or increase in nonnative species can inhibit cypress seedlings by blocking the sunlight they need to grow (McGraw 2007, p. 23). See “Compounding Threats” section of the Species Report (Service 2013, pp. 37–38).

Overall Summary of Factors Affecting Santa Cruz Cypress

Impacts to the long-term persistence of Santa Cruz cypress populations from alteration of the fire regime (Factors A and E) remains a significant concern currently and in the future (i.e., at least approximately 100 years, based on the potential lifespan of individual Santa Cruz cypress trees per Lyons (1988) estimate). Because the germination and establishment of new seedlings depends on either fire or a managed substitute (e.g., controlled burns or mechanical disturbance), appropriate fire or disturbance regimes are needed to manage the demographic profile of the five populations. Lack of fire or other disturbance to promote germination and seedling establishment poses a senescence risk to the stands and populations of Santa Cruz cypress (Service 2013, p. 30). Without recruitment of new individuals, trees in the current even-aged stands may become senescent (or no longer reproductive) and no longer produce cones and seeds necessary for long-term reproductive success and persistence of the populations (which has been observed in Santa Cruz cypress populations by McGraw (2007, pp. 20–21)). While most of the populations have been protected through acquisition of lands for conservation, no active management is currently occurring to manage the demographic profile of the

populations. Research on suitable management methods has only begun recently at Bonny Doon Ecological Reserve (McGraw 2011); future management of this population is expected to provide additional understanding of conditions that would promote regeneration, thus providing beneficial management recommendations that could be applied to all populations.

Although the fire regime is identified as a significant impact to Santa Cruz cypress at this time, the level of impact does not currently place the species in danger of extinction because of the expected continued presence of the populations into the future, the recruitment (albeit minimal overall) that has been observed to date, and probable additional recruitment that can be expected once effective management (potentially canopy thinning combined with vegetation clearance) is implemented (see “Research Needs” section of the Species Report (Service 2013, p. 46)).

In addition to altered fire regime, other impacts to Santa Cruz cypress and its habitat are currently occurring or potentially occurring in the future, but to a lesser degree than the overall impact from an altered fire regime. These include competition with nonnative, invasive species (Factors A and E); climate change (Factor A); genetic introgression (Factor E); and vandalism or unauthorized recreational activities (Factors A and E). Nonnative plants are competing with Santa Cruz cypress by invading open areas where cypress seedlings could become established, thus competing for soil, nutrients, and light (Service 2013, pp. 31–33). Climate change may cause vegetation shifts and promote more and larger wildfires (Service 2013, pp. 26–29). Genetic introgression of

Santa Cruz cypress with at least two different cypress species could result in hybridization and result in the loss of Santa Cruz cypress's competitive advantage in its preferred habitat (Service 2013, pp. 31–31). Vandalism and unauthorized recreational activities may inhibit seedling establishment and increase erosion (Service 2013 p. 33). Additionally, although substantial mechanisms are currently in place to protect Santa Cruz cypress and its habitat, the existing regulatory mechanisms are inadequate to fully protect the species from these threats (Factor D). Based on our current analysis and the current level of management being implemented, the remaining impacts are expected to influence Santa Cruz cypress's habitat suitability and its ability to reproduce and survive in the future.

In summary, impacts from development, agricultural conversion, logging, and oil and gas development, which were considered imminent at the time of listing, have been substantially reduced or ameliorated. Other impacts identified at or since listing (i.e., alteration of fire regime; competition with nonnative, invasive species; climate change; genetic introgression; and vandalism (including unauthorized recreational activities)) continue to impact Santa Cruz cypress or are expected to impact the species in the future. Although individually these impacts (with the exception of altered fire regime) are of low or moderate concern to the species, their cumulative impact can promote and accelerate unnatural conditions (Service 2013, pp. 37–38). For example, human intrusion into previously undisturbed areas contributes to colonization of nonnative plant species in the remote areas of Santa Cruz cypress forests, which in turn may result in increased wildfires and potentially increased community concern for wildfire suppression activities.

These types of interactions could become a greater concern to Santa Cruz cypress in the future if restricted management leads to increased human activity in cypress forests.

The high-level impact to Santa Cruz cypress and its habitat that is of greatest concern at this time is an altered fire regime. The long-term persistence of Santa Cruz cypress posed by this high-level impact is exacerbated by the lack of species management, resulting in continued affects to the age structure and demographic profile of the species. Although operating on the species currently, the impacts from an altered fire regime, either alone or in combination with the other impacts identified above, do not place the species at immediate risk of extinction. Reproduction and recruitment is evident (although not at a level sufficient for long-term persistence) based on recent data in at least four populations (i.e., the portion of the Bonny Doon population that burned in the 2008 Martin Fire, and at the Eagle Rock, Butano Ridge, and Majors Creek populations) (Service 2013, p. 46); insufficient recruitment is also likely the case at the Bracken Brae population and the portion of the Bonny Doon population that did not burn in the 2008 Martin fire, although these data are unavailable. However, if fire or other disturbance in the future does not occur to promote germination and seedling establishment (whether through a natural fire event or active management), population effects that may result from senescence are likely to place the species in danger of extinction.

Distinguishing Threats for Both Cypress Varieties

As described above in the **Background** section, recent taxonomic evaluations of *Hesperocyparis abramsiana* identified two varieties: *H. a. var. butanoensis* (Butano Ridge population) and *H. a. var. abramsiana* (Eagle Rock, Bracken Brae, Bonny Doon, and Majors Creek populations) (Adams and Bartel 2009). Therefore, the threats analysis provided in the Species Report (Service 2013, entire) and summarized in this document includes a separate evaluation for each of the five populations, in part to distinguish the level of impact the current threats have on the two separate varieties. The information summarized below is evaluated and described in detail in the “Discussion of Threats to the Two Separate Varieties” section of the Species Report (Service 2013, pp. 38–40).

The Butano Ridge population (*Hesperocyparis abramsiana* var. *butanoensis*) is primarily threatened by changes in the historical fire regime (Factors A and E). The population is located away from developed areas, but because it is near a lumber operation, there likely are fire exclusion and suppression activities in the vicinity that alter the fire regime. Other impacts identified at the time of listing are no longer impacting this population or are no longer considered significant (e.g., logging, oil and gas drilling), in large part due to this population now being fully protected and managed within the boundaries of Pescadero Creek County Park. Although this variety is not considered a separate species, its status as a separate variety indicates its divergence from other populations of the species. Further divergence, and potentially the process of speciation, may continue through sustained reproductive isolation from other Santa Cruz cypress populations. Additionally, this is the only location for this variety, and it is composed of a single stand, thus making it vulnerable to an impact such as disease if

exposed. However, at this time it is highly unlikely that potential impacts such as development, disease, predation, and others (as described in the Species Report (Service 2013, pp. 23–40)) would occur at the Butano Ridge population. An altered fire regime is the main concern present at this population, with potential concerns currently or in the future related to competition with nonnative species (Factors A and E) and climate change (Factor A).

Similar to the Butano Ridge population described above, the primary impact to the Eagle Rock, Bracken Brae, Bonny Doon, and Majors Creek populations (*Hesperocyparis abramsiana* var. *abramsiana*) is the alteration of the fire regime (Factors A and E), which was identified at the time of listing. This impact remains present at all populations of the Santa Cruz cypress, although management actions at the Bonny Doon Ecological Reserve have included some mechanical vegetation removal in an attempt to reduce this impact (Service 2013, pp. 39–40). Impacts from competition with nonnative species (Factors A and E) and climate change (Factor A) also threaten the long-term persistence of both varieties of Santa Cruz cypress (in addition to vandalism and unauthorized recreational activities (Factors A and E), and genetic introgression (Factor E) potentially impacting the *H. a.* var. *abramsiana* populations), and there are no management actions proposed to address these concerns. The existing regulatory mechanisms are inadequate to fully protect the species from these impacts (Factor D). Please see the “Current Threats” and “Discussion of Threats to the Two Separate Varieties” sections of the Species Report for additional discussion related to current or potential threats to these Santa Cruz cypress populations (Service 2013, pp. 23–40).

Finding

An assessment of the need for a species' protection under the Act is based on whether a species is in danger of extinction or likely to become so because of any of five factors: (A) The present or threatened destruction, modification, or curtailment of its habitat or range; (B) overutilization for commercial, recreational, scientific, or educational purposes; (C) disease or predation; (D) the inadequacy of existing regulatory mechanisms; or (E) other natural or manmade factors affecting its continued existence. As required by section 4(a)(1) of the Act, we conducted a review of the status of this plant and assessed the five factors to evaluate whether Santa Cruz cypress is endangered or threatened throughout all of its range. We examined the best scientific and commercial information available regarding the past, present, and future threats faced by the species. We reviewed information presented in the 2011 petition, information available in our files and gathered through our 90-day finding in response to this petition, and other available published and unpublished information. We also consulted with species experts and land management staff with CDFW, CDPR, the County of San Mateo, and the County of Santa Cruz, who are actively managing for the conservation of Santa Cruz cypress. For the purposes of this discussion, we define foreseeable future as at least approximately 100 years based on the potential lifespan of individual Santa Cruz cypress trees per Lyons' (1988) estimate (see the "Life History" discussion in the Species Report (Service 2013, pp. 8–9) for additional discussion).

In considering what factors might constitute threats, we must look beyond the mere exposure of the species to the factor to determine whether the exposure causes actual impacts to the species. If there is exposure to a factor, but no response, or only a positive response, that factor is not a threat. If there is exposure and the species responds negatively, the factor may be a threat and we then attempt to determine how significant the threat is. If the threat is significant, it may drive, or contribute to, the risk of extinction of the species such that the species warrants listing as endangered or threatened as those terms are defined by the Act. This does not necessarily require empirical proof of a threat. The combination of exposure and some corroborating evidence of how the species is likely impacted could suffice. The mere identification of factors that could impact a species negatively is not sufficient to compel a finding that listing is appropriate; we require evidence that these factors are operative threats that act on the species to the point that the species meets the definition of endangered or threatened under the Act.

As a result of recent information, we know that there are a significantly larger number of Santa Cruz cypress individuals than were known at the time of listing (Service 2013, p. 45) and that there is significant conservation of lands that support the populations. Significant impacts at the time of listing that could have resulted in the extirpation of all or parts of populations have been eliminated or reduced since listing. We conclude that the previously recognized impacts to Santa Cruz cypress from present or threatened destruction, modification, or curtailment of its habitat or range (specifically, residential development, agricultural conversion, logging, and oil and gas drilling)

(Factor A); overutilization for commercial, recreational, scientific, or educational purposes (Factor B); disease or predation (Factor C); and other natural or human made factors affecting its continued existence (specifically, reproductive isolation) (Factor E) do not rise to a level of significance, either individually or in combination, such that the species is in danger of extinction now or in the foreseeable future.

However, alteration of the fire regime (Factors A and E) has the potential to disrupt the long-term persistence of the species across its entire range (resulting in the species potentially facing a senescence risk in the future) if fire continues to be excluded or suppressed near these populations. Current recruitment in at least four populations (the portion of Bonny Doon population that burned in the 2008 Martin Fire, and the Eagle Rock, Butano Ridge, and Majors Creek populations) is evident; however, the current level of recruitment is not sufficient to maintain the populations in the absence of fire (Service 2013, p. 26). This is likely also the case with the Bracken Brae population and the portion of the Bonny Doon population that did not burn.

Santa Cruz cypress will continue to be impacted by competition with nonnative, invasive species (Factors A and E); genetic introgression (Factor E); vandalism and unauthorized recreational activities (Factors A and E); and potentially climate change (Factor A). Additionally, the existing regulatory mechanisms are inadequate to fully protect the species from these threats (Factor D). However, the severity and magnitude of threats, both individually and in combination, and the likelihood that any one event would affect all populations is significantly reduced as a result of the removal of multiple

threats, the reduced impact of most remaining threats, and the extensive amount of conservation occurring throughout the range of the species (including, but not limited to, extensive preservation of occupied lands in perpetuity and development of management plans to enhance habitat).

In conclusion, we have carefully assessed the best scientific and commercial information available regarding the past, present, and future threats faced by this species. After review of the information pertaining to the five statutory factors, we find that the ongoing threats are not of sufficient imminence, intensity, or magnitude to indicate that Santa Cruz cypress is presently in danger of extinction throughout all its range. Although threats to Santa Cruz cypress still exist and will continue into the foreseeable future, CDFW, CDPR, the County of San Mateo, and the County of Santa Cruz are implementing conservation measures or regulatory actions to reduce the level of impact on Santa Cruz cypress. We therefore find that Santa Cruz cypress now meets the definition of a threatened species (i.e., is likely to become in danger of extinction in the foreseeable future throughout all of its range).

Significant Portion of the Range

Having examined the status of Santa Cruz cypress throughout all its range, we next examine whether the species is in danger of extinction in a significant portion of its range. The range of a species can theoretically be divided into portions in an infinite number of ways. However, there is no purpose in analyzing portions of the range that

have no reasonable potential to be significant or in analyzing portions of the range in which there is no reasonable potential for the species to be endangered or threatened. To identify only those portions that warrant further consideration, we determine whether there is substantial information indicating that: (1) The portions may be “significant” *and* (2) the species may be in danger of extinction there or likely to become so within the foreseeable future. Depending on the biology of the species, its range, and the threats it faces, it might be more efficient for us to address the significance question first or the status question first. Thus, if we determine that a portion of the range is not “significant,” we do not need to determine whether the species is endangered or threatened there; if we determine that the species is not endangered or threatened in a portion of its range, we do not need to determine if that portion is “significant.” In practice, a key part of the determination that a species is in danger of extinction in a significant portion of its range is whether the threats are geographically concentrated in some way. If the threats to the species are essentially uniform throughout its range, no portion is likely to warrant further consideration. Moreover, if any concentration of threats to the species occurs only in portions of the species’ range that clearly would not meet the biologically based definition of “significant,” such portions will not warrant further consideration.

We consider the “range” of Santa Cruz cypress to include five populations (Butano Ridge, Bracken Brae, Eagle Rock, Bonny Doon, and Majors Creek) that span a distance of 15 miles (24 kilometers) from north to south within the Santa Cruz Mountains in San Mateo and Santa Cruz Counties, California. These five populations are all believed to be relictual islands containing representatives of what was once a widespread

flora during glacial periods (Libby 1979, p. 15); historical distribution of Santa Cruz cypress beyond the five currently recognized populations is unknown. In other words, the current distribution is the only known distribution, which has remained the same throughout recorded history.

We considered whether the threats facing Santa Cruz cypress might be different at any of the populations and specifically between the Butano Ridge population (*Hesperocyparis abramsiana* var. *butanoensis*) and the other four populations (*H. a.* var. *abramsiana*). The Butano Ridge population is similar to the other four populations in that it is primarily threatened by changes in the historical fire regime, as was identified as a concern for all five populations at the time of listing. Additionally, threats from competition with nonnative species and climate change exist for all populations. Current threats known only to impact the populations comprised of *H. a.* var. *abramsiana* include genetic introgression, vandalism, and unauthorized recreational use. Our evaluation of the best available information indicates that the overall level of threats is not significantly different at any of these populations (Service 2013, pp. 24–41), with the primary current threat to all populations being alteration of fire regime. Additionally, there are no threats specific to the Butano Ridge population; the threats that are impacting or have the potential to impact the Butano Ridge population are widespread across the species' range (Service 2013, pp. 39–40). It is our conclusion, based on our evaluation of the current potential threats to Santa Cruz cypress at each of the populations in San Mateo and Santa Cruz Counties (see **Summary of Factors Affecting the Species** section of this proposed rule and the “Discussion of Threats to the Species” section of the Species Report (Service

2013, pp. 22–40)), that threats are neither sufficiently concentrated nor of sufficient magnitude to indicate that the species is in danger of extinction at any of the areas that support populations.

Therefore, while no populations of Santa Cruz cypress are at imminent risk of extirpation, ongoing threats continue to affect the likelihood of long-term persistence of the populations and the species such that the Santa Cruz cypress meets the definition of a threatened species under the Act. Therefore, we find that the petitioned action is warranted, and we propose to reclassify Santa Cruz cypress from endangered to threatened status.

Effects of This Rule

If this proposed rule is made final, it would revise 50 CFR 17.12(h) to reclassify Santa Cruz cypress from endangered to threatened on the List of Endangered and Threatened Plants. However, this reclassification does not significantly change the protections afforded this species under the Act. Pursuant to section 7 of the Act, all Federal agencies must ensure that any actions they authorize, fund, or carry out are not likely to jeopardize the continued existence of Santa Cruz cypress. Whenever a species is listed as threatened, the Act allows promulgation of special rules under section 4(d) that modify the standard protections for threatened species found under section 9 of the Act and Service regulations at 50 CFR 17.31 (for wildlife) and 17.71 (for plants), when it is deemed necessary and advisable to provide for the conservation of the species. There are

no 4(d) rules in place or proposed for Santa Cruz cypress, because there is currently no conservation need to do so for this species.

Recovery actions directed at Santa Cruz cypress will continue to be implemented as outlined in the Recovery Plan for this species (Service 1998, entire).

Required Determinations

Clarity of the Rule

We are required by Executive Orders 12866 and 12988 and by the Presidential Memorandum of June 1, 1998, to write all rules in plain language. This means that each rule we publish must:

- (a) Be logically organized;
- (b) Use the active voice to address readers directly;
- (c) Use clear language rather than jargon;
- (d) Be divided into short sections and sentences; and
- (e) Use lists and tables wherever possible.

If you feel that we have not met these requirements, send us comments by one of the methods listed in the **ADDRESSES** section. To better help us revise the rule, your comments should be as specific as possible. For example, you should tell us the names of

the sections or paragraphs that are unclearly written, which sections or sentences are too long, the sections where you feel lists or tables would be useful, etc.

National Environmental Policy Act

We determined we do not need to prepare an Environmental Assessment or an Environmental Impact Statement, as defined under the authority of the National Environmental Policy Act of 1969 (42 U.S.C. 4321 *et seq.*), in connection with regulations adopted pursuant to section 4(a) of the Act. We published a notice outlining our reasons for this determination in the **Federal Register** on October 25, 1983 (48 FR 49244).

References Cited

A complete list of all references cited in this proposed rule is available on the Internet at <http://www.regulations.gov> under Docket No. FWS-R8-ES-2013-0092 or upon request from the Field Supervisor, Ventura Fish and Wildlife Office (see **FOR FURTHER INFORMATION CONTACT** section).

Author

The primary author of this proposed rule is the Pacific Southwest Regional Office in Sacramento, California, in coordination with the Ventura Fish and Wildlife Office in Ventura, California (see **FOR FURTHER INFORMATION CONTACT**).

List of Subjects in 50 CFR Part 17

Endangered and threatened species, Exports, Imports, Reporting and recordkeeping requirements, Transportation.

Proposed Regulation Promulgation

Accordingly, we propose to amend part 17, subchapter B of chapter I, title 50 of the Code of Federal Regulations, as set forth below:

PART 17—ENDANGERED AND THREATENED WILDLIFE AND PLANTS

1. The authority citation for part 17 continues to read as follows:

AUTHORITY: 16 U.S.C. 1361–1407; 1531–1544; 4201–4245, unless otherwise noted.

2. Amend § 17.12(h) as follows:

- a. By removing the entry for “*Cupressus abramsiana*” under CONIFERS, and

b. By adding an entry for "*Hesperocypris abramsiana*" under CONIFERS to read as follows:

§ 17.12 Endangered and threatened plants.

* * * * *

(h) * * *

Species		Historic range	Family	Status	When listed	Critical habitat	Special rules
Scientific name	Common name						

* * * * *

CONIFERS

* * * * *

<i>Hesperocyparis abramsiana</i>	Santa Cruz cypress	U.S.A. (CA)	Cupressaceae	T	252	NA	NA
----------------------------------	--------------------	----------------	--------------	---	-----	----	----

* * * * *

Dated: August 13, 2013

Stephen Guertin

Acting Director, Fish and Wildlife Service

Billing Code 4310-55-P

[FR Doc. 2013-21313 Filed 08/30/2013 at 8:45 am; Publication Date:
09/03/2013]